# Blu-Ox Software

**1.Display**
LCD Graphics  96 x  64  pixels
Displays  0-9  + position

**2. Processor**  ST7FLITE15

The programme is in the processornumbers in a library
Position command is in programme
Position is 4 parameters

**3. RAM** – 256 Bytes
Flash: Bit Pattern to generate Digit or Character Display

**4. Flash** – 4K
Language – Assembler

**5. Pattern generation** is area of 24 x 32

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|---|---|---|---|---|---|
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Page numbers – where on page a block of of 8 is displayed

0 24/32

| | | | | | |
|---|---|---|---|---|---|
| | | X | X | | |
| | | X | X | | |
| | | X | X | | |
| | | X | X | | |
| | | X | X | | |
| | | X | X | | |

0

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0 24/32

| | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| X | X | X | X | X | X |
| X | X | X | X | X | X |
| | | | | | |
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0

Transfer blocks of 24 x 32 bits stored in flash: 144 Bytes per character.

Storing 0-9 + decimal point + space.

A-Z & other characters to be stored in Flash.
Uses a look up table
Start address 0

End address 144

Second block
Start address 145

End address 289

Programe write the Data once.
It only write on a change
LCD remembers the stored data
Only re-writes the changed data
Uses Non- proportional Fonts

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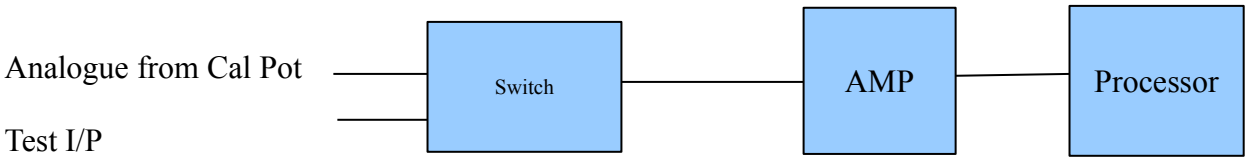
**6.Basic Schematic**




Processor generates Binary output directly proportional to Analogue I/P
Decide Oxygen 0r Derived Nitrogen

Generate new number

Convert into 4 Decimal digits
Look up digits to display a character stream

**7.Notes**

- Move digits up 8 or down 8 by changing Position address – 5 Byte change in programe.
- Can Alphanumerics be in top 16 at the same time as Numerics YES
- Smaller digits are possible in multiples of 8 high
- More changes to digits during measurement more battery current drain
- Processor normally in sleep mode
- Larger scree / more pixels requires requires re-write of digits & positio etc.